

Sensitivity and Specificity of Clinical Testing for Digital Nerve Injury

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Abstract : The accuracy of a diagnostic test used to classify a patient as having disease or being disease-free is a valuable piece of information to be used by the physician when making treatment decisions. Finger laceration, suspected to have nerve injury is a challenging decision for the treating surgeon. The purpose of this study was to evaluate the sensitivity, specificity and predictive values of six clinical tests in the diagnosis of digital nerve injury. The six clinical tests included light touch, pin prick, static and dynamic 2-point discrimination, Semmes Weinstein monofilament and wrinkle test. Data comparing pre-surgery examination with post-surgery results of 42 patients with 52 digital nerve injury was evaluated. The subjective examinations, light touch, pin prick, static and dynamic 2-point discrimination and Semmes-Weinstein monofilament were not sensitive (57.6, 69.7, 42.4, 40 and 66.8% respectively) and specific (36.8, 36.8, 47.4, 42.1 and 31.6% respectively). Wrinkle test, the only objective examination, was the most sensitive (78.1%) and specific (55.6%). This result gives no pre-operative examination the ability to predict the result of explorative surgery.

Keywords : digital nerve, injury, nerve examination, Semmes-Weinstein monofilament, sensitivity, specificity, two point discrimination, wrinkle test

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